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L4: Entry 1 of 2

File: JPAB

Jan 11, 1980

PUB-NO: JP355003820A

DOCUMENT-IDENTIFIER: JP 55003820 A

TITLE: OXIDE CATALYST FOR CATALYTIC COMBUSTION OF HYDROGEN

PUBN-DATE: January 11, 1980

INVENTOR-INFORMATION:

NAME

COUNTRY

HARUTA, MASAKI

SANO, HIROSHI

ASSIGNEE-INFORMATION:

NAME

COUNTRY

AGENCY OF IND SCIENCE & TECHNOL

APPL-NO: JP53076151

APPL-DATE: June 22, 1978

US-CL-CURRENT: 502/337

INT-CL (IPC): B01J 23/74; C01B 5/00; F23D 13/18

ABSTRACT:

PURPOSE: To enhance the efficiency of combustion by saving energy necessary for the preheating of catalyst by obtaining an oxide catalyst combustible at a comparatively low temperature of less than 400°C without causing hydrogen to take place a flame combustion.

CONSTITUTION: A mixed aqueous solution containing water-soluble salts, e.g., the nitrates, sulfates, chlorides, etc., of cobalt and nickel, is neutralized by an alkali hydroxide, aqueous ammonia, or an alkali carbonate to cause the coprecipitation of cobalt and nickel. The mixed hydroxides or carbonates, adjusted so as to contain 20 to 80 atom% cobalt, are washed sufficiently, dried, and then baked at 400°C in the presence of air to obtain a binary mixed oxide catalyst.

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Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ 2. Document ID: JP 55003820 A, JP 80046217 B

L4: Entry 2 of 2

File: DWPI

Jan 11, 1980

DERWENT-ACC-NO: 1980-13645C

DERWENT-WEEK: 198008

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TITLE: Oxide catalyst for catalytic combustion of hydrogen - comprises cobalt-nickel binary type mixed oxide for low temp. combustion

PATENT-ASSIGNEE:

ASSIGNEE

CODE

AGENCY OF IND SCI & TECHNOLOGY

AGEN

PRIORITY-DATA: 1978JP-0076151 (June 22, 1978)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 55003820 A	January 11, 1980		000	
JP 80046217 B	November 21, 1980		000	

INT-CL (IPC): B01J 23/74; C01B 5/00; F23D 13/18

ABSTRACTED-PUB-NO: JP55003820A

BASIC-ABSTRACT:

The oxide catalyst is Co-Ni type two elements (binary) mixed oxide (the atomic fraction of Co is 20-80%). The catalyst burns the H₂ at <=400 degrees C.

Since the energy at which hydrogen catches fire is 1/10 of those of common hydrocarbon fuels, and the combustion rate of hydrogen is 10 times as great as those of the common hydrocarbon fuels, it is difficult to burn hydrogen safely as well as cleanly. (when it is pre-mixed with air and flamed, back fire often occurs, and when it is flamed without being mixed with air, it produces great amts. of nitrogen oxides). By using the catalyst, hydrogen can be burned or easily, at lower temp., and more safely than conventional hydrocarbon fuels.

TITLE-TERMS: OXIDE CATALYST CATALYST COMBUST HYDROGEN COMPRISE COBALT NICKEL BINARY TYPE MIX OXIDE LOW TEMPERATURE COMBUST

DERWENT-CLASS: E36 H06 J04 Q73

CPI-CODES: E35-V; E35-W; H06-C01A; J04-E04; N02-B01; N02-C;

CHEMICAL-CODES:

Chemical Indexing M3 *01*

Fragmentation Code

A428 A940 C730 C108 C803 C802 C807 C805 C804 C801

C550 A400 A427 Q421 M781 R032 R035 R036 M411 M902

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